Biology I (Honors) Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Creative Project: Central Dogma Explanation Period: \_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_

**Procedure:**

You know that the central dogma of molecular biology explains how DNA is used to ultimately create proteins. It is now your task to create an explanation for each step of the diagram shown below. A list of terms you **must use** in your writing is also included below. Each word, used correctly, is worth 2 points for a total of 80 points, plus 5 point for the project planning sheet on the back of this page and 5 points for creativity.

**DNA**

**mRNA**

**Proteins**

**Transcription**

**Translation**

**Replication**

* Adenine
* Amino Acid
* Anticodon
* Chargaff’s rules
* Codon
* Cytosine
* DNA
* DNA Ligase
* DNA Polymerase I
* DNA Polymerase III
* Double-stranded
* Exon
* Guanine
* Helicase
* Hydrogen Bond
* Intron
* Mutation
* mRNA
* Nitrogen bases
* Nucleotide
* Nucleus
* Peptide Bond
* Promoter
* Protein/Polypeptide
* Replication
* Ribosome
* RNA Polymerase
* RNA Primase
* rRNA
* Phosphate
* Semiconservative
* Single-stranded
* Thymine
* Topoisomerase
* Transcription
* Transcription factors
* Translation
* tRNA
* Helix
* Uracil

Teacher Comments:

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90

**Central Dogma Project Planning Sheet**

1. Are you working individually or with a partner? If with a partner, please include your partner’s name.

2. Brainstorm three ideas for what you would like to for this project.

3. Out of those three ideas, decide (with your partner, if applicable) your top choice and write a brief explanation about how you plan to do your project and divide up the work with your partner.

4. Using your time wisely is going to be key for this project. In the space below, draft a schedule of what you plan to accomplish in the next two class periods and what might need to be done outside of school.

Ms. J’s approval: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Biology I Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Creative Project: Central Dogma Explanation Period: \_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_

**Procedure:**

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**DNA**

**mRNA**

**Proteins**

**Transcription**

**Translation**

**Replication**

1. Adenine
2. Amino Acid
3. Anticodon
4. Chargaff’s rules
5. Codon
6. Cytosine
7. Deoxyribose
8. DNA
9. DNA Polymerase
10. Double-stranded
11. Guanine
12. Helicase
13. Hydrogen Bond
14. mRNA
15. Nitrogen bases
16. Nucleotide
17. Nucleus
18. Peptide Bond
19. Promoter
20. Protein/Polypeptide
21. Replication
22. Ribose
23. Ribosome
24. RNA Polymerase
25. RNA Primase
26. Phosphate
27. Semiconservative
28. Single-stranded
29. Thymine
30. Terminator
31. Transcription
32. Translation
33. tRNA
34. Helix
35. Uracil

Teacher Comments:

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90

**Central Dogma Project Planning Sheet**

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Ms. J’s approval: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In the chart below, sort the 35 terms required for this project based on which process they apply to. Use your notes to help you. Some terms may be used more than once, in multiple categories.

|  |  |  |
| --- | --- | --- |
| Replication | Transcription | Translation |
|  |  |  |